Translating Technology

ATI
Amplifier Technologies

Performance and Reliability. Without the Window Dressing.

For more than three decades, designer/engineer Morris Kessler has created audio products with a simple goal in mind: delivering maximum performance and reliability. In his products, you will find no gratuitous features or needless ornamentation. But everywhere you look, you will find design touches that improve sound quality and increase dependability.

Beginning in the 1960s with SAE—one of the pioneers in high-quality solid-state amplification—and extending into the new millennium with Amplifier Technologies, Inc., Kessler has always relied on proven designs. Most of his original products, some more than three decades old, are still hard at work in consumers' homes. Through the decades, he has refined his circuits to near-perfection. And from the first day, he has operated his own Southern California factory—unlike most audio companies, which subcontract their vital manufacturing processes to anonymous offshore companies.

In the following pages, you will see what makes ATI today's best value in home audio.

AT2000 with rack mount option shown actual size

An Interview with Morris Kessler, ATI Founder and Chief Engineer

Is there an overall philosophy in the way you design and build products?
In all the products I've designed—even going back 30 years ago—the focus is on value and performance. ATI products aren't inexpensive, but you always get your money's worth. You're not buying a boxful of air.

What's filling all that space?
Big heat sinks, for one thing—we could save space by using fans, but that creates a lot of noise. Big transformers, and separate power supplies for each channel. We also ground all of our amplifiers at a single, central point, instead of grounding them in the transformer. That improves the grounding and lowers noise, but it means we have to have extra rectifiers in the power supply. As a result, we create a weight issue, too. Heat sinks and big transformers are heavy, so you need an extremely sturdy chassis to support them. We could save some cost by, for example, using cooling fans, but the end product wouldn't be as good as I want it to be.

You seem to take your design cues from Henry Ford–all of your products come in whatever color you want, as long as it's black.
People should get what they pay for. Using a faceplate that costs as much as the rest of the amp costs doesn't make sense to me. An amp's chassis should be sturdy and have a nice design, and that's it.

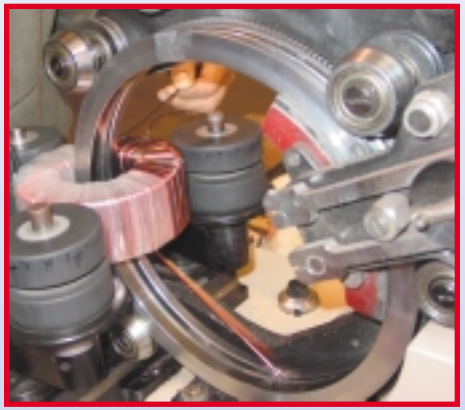
We assure the quality behind the name

How do you assure that all of your products achieve the quality standards you set?
Well, we manufacture or assemble everything right here in our own factory. I do have an office in the factory, but my real office is out on the production line. I spend a lot of time there making sure everything's running right.

How has ATI evolved over the years?
I've been manufacturing amplifiers for decades. Around '93, I got interested in computer-aided design [CAD], and built a stereo amp just for fun. I got the bug again, and brought the amp to the 1993 Consumer Electronics Show to see if we could drum up any interest. I ended up getting requests to build amps for other companies, and we've since built amps for at least a half-dozen companies whose names you would definitely recognize. In between those jobs, we started building ATI amps. The first ATI amps were very successful, and we've expanded the line greatly from there.

ATI Manufacturing: No Shortcuts, No Compromises

We assemble all ATI products in our 50,000-square-foot Southern California factory. Everything is built 100 percent to our specifications, and we monitor every aspect of the quality-control process ourselves. Here are some of the steps we take to make ATI products the best value in the audio industry. All of these improvements pay off in dependability and sound quality.


Bifilar transformer winding process

Toroidal Transformers
An amplifier starts with the power supply, which starts with the transformer—the source of an amplifier's power. We wind all of our own transformers in our own shop, to assure the highest quality. The transformer cores in our amplifiers are made from MOH, with magnetic properties that make the cores 18 percent more efficient than standard transformer cores. Each amplifier channel gets its own set of windings, which minimizes interaction between channels. We wind the cores two wires at a time, a technique called "bifilar winding" that ensures perfectly symmetrical transformers that work more efficiently and produce less distortion. Our techniques and materials combine to create the highest quality power transformers in existence.

Each amplifier channel gets not only its own set of transformer windings, but its own rectifier and storage capacitors, thus giving each channel its own separate power supply. Even if the left channel is pushed to the limit by, say, a loud car crash on a movie soundtrack, it does not affect the power that the other channels receive.

Transformers produced in ATI factory

Enclosures
We house our products in rugged chassis, with powder-coated finishes that resist scratches and prevent corrosion. Our hardware is equally durable and rustproof, made from Teflon-coated, 18-8 stainless steel. We use inserts instead of threading metal parts resulting in a stronger unitized chassis.

AT2000 circuit board with heat sink

Heat Sinks

Because we design our amplifiers for the home as well as the rigorous demands of commercial applications, we use substantial heat sinks for each channel. This results in amplifiers that run absolutely quietly and as coolly as possible. The result; there is no noise to mar your listening experience and your amplifier operates more efficiently for a longer life. These over-size heat sinks eliminate the need for fans that add noise and introduce dust into the amplifier.

Circuit Boards

We use double-sided FR-4 glass epoxy circuit boards in all of our products. Not only does a double-sided board handle twice the electrical current that a single-sided board does, it produces much more solid connections to the components on the board. The solder joints that secure the components to the board cover both surfaces of the board, plus the inside of the hole into which the component leads are inserted. As a result, our circuit boards are practically perfect, with nearly zero failures due to bad connections and cold solder joints.

The components we use on our circuit boards also add to the quality of ATI products. All of the gain stages in our products employ high-quality metal-film resistors with 1-percent tolerances, to ensure that each and every circuit board functions exactly like the last.

Wiring

Open most multichannel power amplifiers and you will see a "rat's nest"—dozens of wires running haphazardly through the chassis. Open up an ATI amplifier, though, and you will see a clean layout, with wires wrapped neatly in a fiberglass cloth tubing originally developed for the aerospace industry. The tubing protects the wire from both heat and accidental damage.

Fiberglass cloth tubing protects wires

Rear panel chassis-mount RCA jacks

Chassis-Mounted RCA Jacks

The gold-plated RCA input jacks on our amplifiers are mounted directly to the rear panel, instead of to a circuit board. While this technique complicates assembly, it results in a more robust connection, and the jack cannot be accidentally broken off by the tight-gripping RCA plugs used on many audiophile interconnect cables.
In addition, our AT2000 and AT3000 Series power amplifiers use XLR-type connectors to make connections with the balanced audio output from a preamplifier such as our ATP8500.1 with balanced audio outputs.

Trouble-Free Circuit Breakers

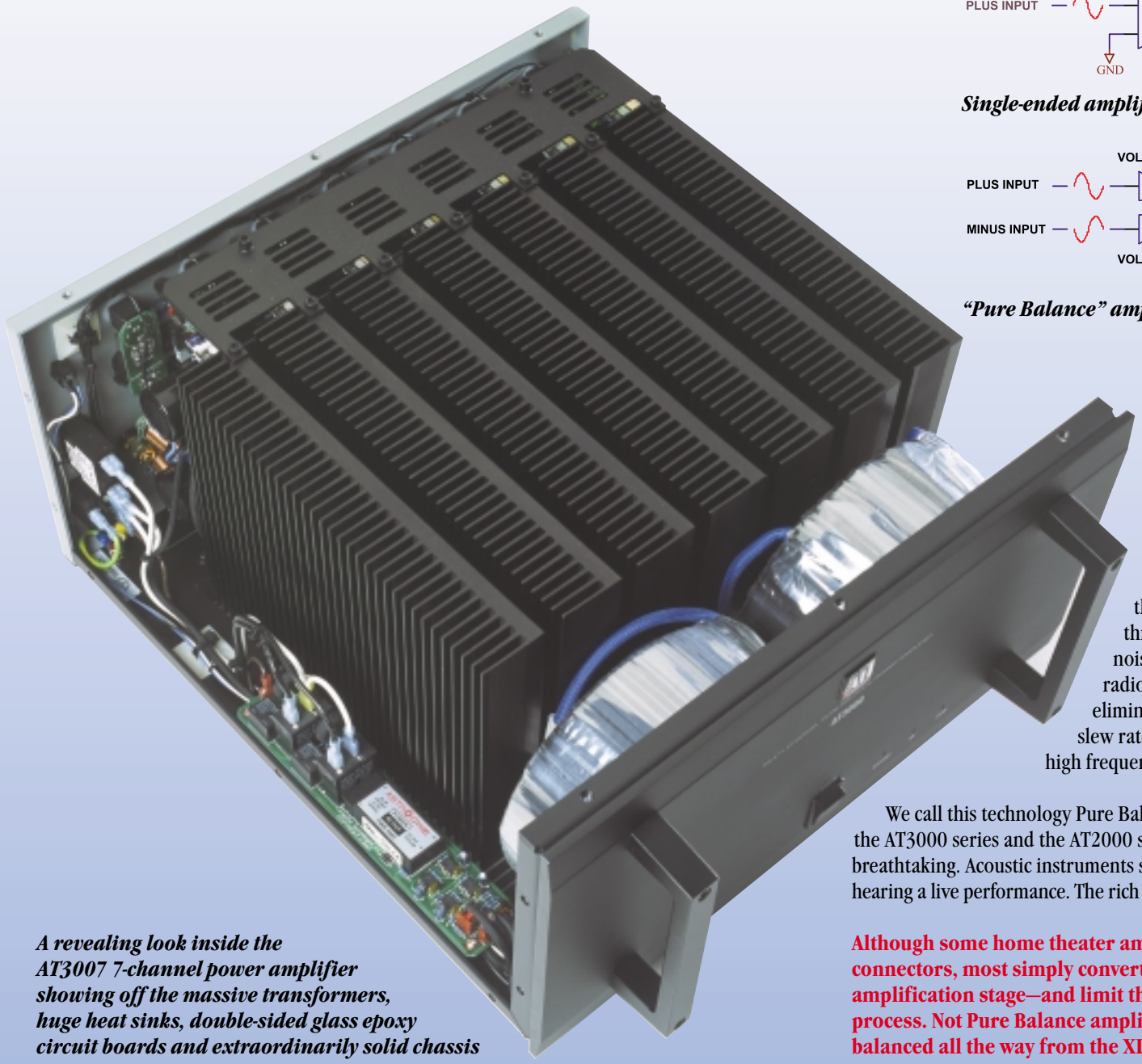
Our higher power multi-channel amplifiers use magnetic circuit breakers to protect against AC overloads. If the breaker trips, it's a simple matter to reset it. Most amplifiers, however, use fuses for overload protection; if a fuse blows, you must have the proper one available to restore power to your amplifier.

Protection Circuits

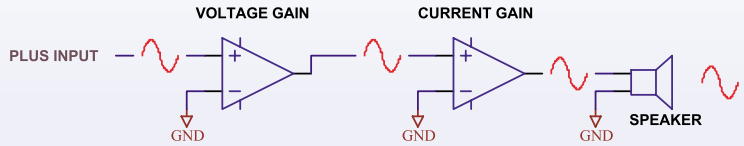
ATI amplifiers employ lightning-fast optically-coupled protection circuits that are completely removed from the signal path so they cannot affect the sound quality. These protection circuits are designed to detect electrical "shorts" in speakers or speaker wires and to sense electrical "spikes." If triggered, the circuit will disengage the output. The protection circuit will sample the affected circuit every 10 seconds and will restore output automatically when safe to do so. This special feature minimizes the chance of your amplifier going out of service just when you've filled your home theater with expectant guests.

Amplifiers on the assembly line

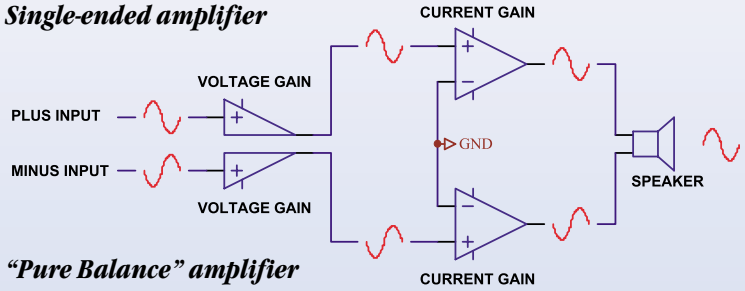
Pure Balance® Amplifiers: AT3000 and AT2000 Series



A revealing look inside the AT3007 7-channel power amplifier showing off the massive transformers, huge heat sinks, double-sided glass epoxy circuit boards and extraordinarily solid chassis



Single-ended amplifier



"Pure Balance" amplifier

Engineers, reviewers, and home theater enthusiasts may often disagree, but when it comes to amplifiers, there is one fact on which they all find common ground: The best possible design is the fully differential balanced amplifier.

A fully differential amplifier is basically two separate amplification circuits per channel. One circuit amplifies the positive half of the audio signal, while the other amplifies the negative half. The benefits of this design are tremendous. It automatically rejects any noise coming in from external sources, such as radio-frequency and electromagnetic interference. It eliminates hum and reduces distortion. It also doubles the slew rate (speed) of the amplifier, for better reproduction of high frequencies, and better transient performance.

We call this technology Pure Balance®, and we use it in two of our amplifier lines: the AT3000 series and the AT2000 series. The result of Pure Balance technology is breathtaking. Acoustic instruments sound so natural and clear, you may think you're hearing a live performance. The rich ambience of concert halls envelops you as never before.

Although some home theater amplifiers have balanced, XLR-type input connectors, most simply convert the balanced signal to unbalanced in the first amplification stage—and limit the benefits of a balanced connection in the process. Not Pure Balance amplifiers. Pure Balance amplifiers keep the signal balanced all the way from the XLR inputs to the speaker terminals.

AT2000 Series power amplifier

With substantial power on tap—300 watts per channel for the AT3000 series, 200 watts per channel for the AT2000 series—both amplifiers have the muscle to power the largest home theater systems. The AT3000 series, in particular, produces enough power even for capacious screening rooms. Both amplifiers are available in any two to seven channel models from the AT2002/AT3002 to the AT2007/AT3007. Because each amplifier channel resides on a separate, plug-in module, upgrades are easy. You can start with, say, five channels and add two more if you decide to move up to Dolby Digital EX®, DTS ES-Discrete®, or other 6.1- and 7.1-channel surround-sound technologies.

Most amplifiers this large use loud cooling fans; the AT3000 and AT2000 series instead use large heat sinks, so you can place them anywhere in a room without having to worry about noise. Large amplifiers have a tendency to trip household circuit breakers, due to the tremendous inrush of current necessary to charge up their power supplies. This problem simply does not exist with the AT3000 and AT2000 series amps, because both feature ATI's Ultra Soft Turn-On circuit. This circuit progressively powers up the amplifier gradually, so the current inrush is minimal. Even with the seven-channel AT3007, which produces 2,100 watts of power, you will not see your lights dim when you power up the amplifier.

Although it is extremely unlikely one could push these amplifiers past their limits, there is always the possibility of accidentally damaging a speaker cable and shorting out the amplifier. With the AT3000 and AT2000 series power amplifiers, you needn't be concerned. Both include a protection circuit that automatically disengages the output in an overload situation without the use of relays. If an overload occurs, the circuit monitors the conditions every 10 seconds, and restores output automatically once the overload situation is removed. This protection circuit is optically coupled to the audio circuit, with no direct electrical connection. Thus, it cannot affect sound quality. In the equally unlikely event that the amplifier's magnetic circuit breaker shuts down, resetting it is as simple as flipping a switch. There is no down-time for fuse replacements or costly service calls.

Back panel of the AT2007 (the AT3007 has the same layout but is taller)

We supply the AT3000 series with a power cord that fits only into a 20-amp electrical socket. This amplifier is so powerful it cannot reach peak output from a 15-amp circuit. The power cord is designed specifically for 20-amp use, providing a more robust connection to the amplifier than a 15-amp cord can offer. The AT2000 series uses the same 20-amp connection at the amplifier end, but substitutes a 15-amp plug.

The huge transformers used in these amplifiers employ MOH cores with bifilar windings, manufactured by us in our own factory. Of course, both amps also use double-sided glass epoxy circuit boards, and an extraordinarily solid, massive chassis built to support the heavy heat sinks and transformers required in amps this large.

A trigger feature lets these amps interface with control systems, so they can be turned on and off automatically, or from a remote control.

Listen to the AT3000 and AT2000 series amps. We think you'll agree that no other fully differential amplifiers in the world can beat their performance and power—or their price.

AT3000 Series
2 to 7 Channels
300 Watts/Ch
(8 Ohms)
450 Watts/Ch
(4 Ohms)

AT2000 Series
2 to 7 Channels
200 Watts/Ch
(8 Ohms)
300 Watts/Ch
(4 Ohms)

Son of the Standard: The AT1800 Series

AT1800 series power amplifier

We built much of our reputation on the AT1505 amplifier, which won acclaim in such magazines as *Home Theater*, *Audio*, and *Stereophile Guide to Home Theater* as one of the best values in a multichannel amp. Our AT1800-series amplifiers are a direct outgrowth of the AT1505, with the same audiophile-grade sound, but with 20 percent more power and many new features designed to further enhance the amp's performance.

The AT1800 series comprises six amplifier models, all identical except for the number of channels. The series starts with the two-channel AT1802, and finishes with the seven-channel AT1807. The amplifiers are modular; each channel resides on a separate, plug-in circuit board, so increasing the number of channels is easy. You can go from a five-channel AT1805 to a seven-channel AT1807 in a matter of minutes.

Like all other ATI amplifiers, the AT1800-series amps are cooled by large heat sinks, not by cooling fans. This feature may be especially important in this amplifier, which is likely to find use in many home theater systems that do not hide the equipment in a rack or closet. You can set this amp right next to your favorite listening chair without having to worry about fan noise. One significant improvement over the AT1505 is the protection circuit used in the AT1800 series. This circuit automatically shuts down the amplifier in an overload situation, such as when someone accidentally cuts into a speaker cable and shorts out the amp. Once the protection circuit is engaged, it checks the conditions every 10 seconds, and restores output automatically when the overload situation is remedied. The protection circuit is optically coupled to the audio circuit; because there's no direct electrical connection, the protection doesn't affect sound quality. A magnetic circuit breaker provides further protection and eliminates the need for cumbersome fuses.

Back panel of the AT1807

The AT1800-series amps use the same transformer construction as the top-of-the-line AT3000 and AT2000 series amps: MOH cores with bifilar windings, built in our own factory. It also uses double-sided glass epoxy circuit boards, and the same rugged, powder-coated chassis used in all our products.

An inside look at the AT1807 7-channel power amplifier

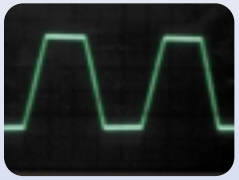
Even the AT1807, with 1,260 total watts, will not trip your household circuit breaker or dim the lights when you switch it on. High power amps draw a momentary—but tremendous—inrush of electrical current when you turn them on. The AT1800-series amps do not, thanks to ATI's Ultra Soft Turn-On circuit. This circuit gradually powers up the amp, to ease the load on your household circuits. And the amp includes a trigger input that allows it to be turned on and off automatically, or by remote control.

For the best value in a basic home theater amplifier, nothing beats ATI's AT1800-series amps.

AT1800 Series
2 to 7 Channels
180 Watts/Ch (8 Ohms)
270 Watts/Ch (4 Ohms)

Two-Channel Amplifiers For More Than Just Stereo

Two-channel amplifiers aren't just for stereo anymore. They're just as likely to find use powering the two back speakers in a 7.1-channel surround sound system, or driving six ceiling speakers in a master bedroom suite. Nowadays, a two-channel amplifier must produce the sound quality demanded by audiophiles, handle the extreme dynamics of home theater, and provide the reliability expected by custom installers. Few two-channel amps are designed to handle each of these tasks—but for the ATI AT1202 and AT602, it's all in a day's work.



Without clip limiter

With Clip Limiter At Same Level

The AT1202 and AT602 are two-channel amplifiers (120 watts and 60 watts per channel, respectively) with all of the quality features built into ATI's big multichannel amplifiers, including ATI-built transformers with MOH cores and bifilar windings, double-sided circuit boards, and massive heat sinks for quiet, reliable cooling. Both sound excellent in stereo applications. But both also include features designed to enhance their utility in custom-installed audio/video systems.

The AT1202 and AT602 include clip limiters, which prevent the amplifiers from producing significant clipping (distortion), no matter how high the volume is turned up. Distortion can destroy speakers and in-wall volume controls in seconds, but with the AT1202 and AT602, it is never a concern.

Back panels of the AT1202 & AT602

AT1202 power amplifier

AT602 power amplifier

It is not always practical to have a separate amplifier driving each speaker in a multiroom audio system; installers often use a single amp to drive multiple speakers. This arrangement presents a tremendous load that many amplifiers cannot drive, which is why we designed the AT1202 and AT602 specifically so that they can drive a few pairs of speakers without strain. Their output stages remain stable and functioning even with the complex, challenging loads that multiple speakers usually present. When these amps encounter an overload situation, they conduct themselves with grace. An optically coupled protection circuit disengages the amp's output when it encounters an overload. The circuit checks the conditions every 10 seconds, and restores output automatically when the overload is corrected; without the use of relays.

Both amplifiers include a remote trigger feature, which is rare on stereo amps. The remote trigger allows other devices, such as surround-sound preamp/processors and multiroom audio controllers, to turn the AT1202 and AT602 on and off automatically.

You can stack 10 of these amps for a multiroom audio system without having to worry about tripping the house circuit breaker when they're turned on. ATI's Ultra Soft Turn-On circuit gradually powers up the amplifiers to reduce the current load. You won't even see the lights dim!

Whether you're powering a pair of exotic audiophile speakers, or stringing together a yardful of outdoor speakers, the AT1202 and AT602 are up to the task.

AT1202
2 Channels
120 Watts/Ch (8 Ohms)
180 Watts/Ch (4 Ohms)

AT602
2 Channels
60 Watts/Ch (8 Ohms)
90 Watts/Ch (4 Ohms)

Stereo in Six Rooms—From One Amplifier

AT6012 power amplifier

Sound anywhere in your home, at the touch of a button. It's always been the dream of the music lover. The AT6012 makes it a reality. And unlike any other amplifier, the AT6012 is designed to provide up to six rooms of sound with no additional multiroom audio electronics required.

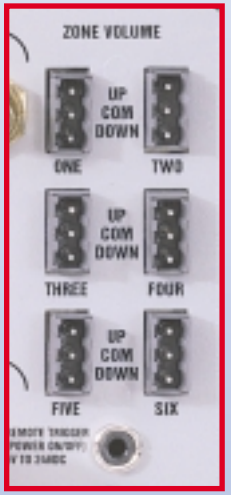
The AT6012 includes connectors for external "up/down" momentary rocker switches, such as the Leviton® 5657-2E pictured; these switches give you up/down volume control. Simple, three-wire Phoenix connectors give you stereo volume control in any room at exceptionally low cost. Because we use high-quality, motorized gain controls instead of inexpensive potentiometers, the AT6012 delivers sound quality far superior to that of typical wall-mounted volume controls. Add six up/down switches, a CD player and speakers, and you have a complete multiroom audio system with performance equal to or better than that of any multiroom system on the market.

With 60 watts per channel, and the same amplification circuits found in ATI's award-winning home theater amplifiers, the AT6012 packs enough power to drive nearly any speaker, and the sound quality to please even the most demanding professionals.

A multiroom amplifier must be especially reliable—it sees use practically every day, and is likely to be installed in an equipment rack that may make it difficult to service. The AT6012, like other ATI amps, is designed and built with a focus on reliability. Its optically coupled protection circuit disengages the output whenever an overload condition (shorted speaker terminals, for example) exists. It then checks the conditions every 10 seconds, restoring output only when the overload condition has been removed; without the use of relays.

Back panel of the AT6012

Closeup view of Phoenix connectors



When we designed the AT6012, we did not sacrifice functionality just to accommodate more channels. So we included all of the features that make ATI amps sound great and function dependably. The AT6012 uses transformers made from MOH cores with bifilar windings, double-sided glass epoxy circuit boards, and separate supply capacitors and power supply rectifiers for each of its 12 channels. Thanks to separate power supplies for each channel, you can crank up the sound for a party without diminishing sound quality in the other rooms.

A rocker switch controls volume in each room

A remote trigger allows such devices as multiroom audio controllers, touchscreen remote controls or a simple wall switch to turn the AT6012 on and off automatically.

With the dependability and sound quality of the AT6012, there's no reason to sacrifice performance for multiroom audio systems. Each and every room can enjoy the same sound quality you'd experience in a ATI-equipped home theater.

AT6012
12 Channels
60 Watts/Ch (8 Ohms)
90 Watts/Ch (4 Ohms)

Power Amplifier Specifications

Model or Series	*AT3000*	*AT2000*	*AT1800*	*AT1202*	*AT602*	*AT6012*
Number of Channels	2 to 7	2 to 7	2 to 7	2	2	12
*EIA 1kHz Output Power at 8 Ohms**	350 watts	250 watts	210 watts	140 watts	75 watts	75 watts
*EIA 1kHz Output Power at 4 Ohms**	475 watts	375 watts	315 watts	220 watts	110 watts	120 watts
*FTC Full Bandwidth Output Power at 8 Ohms***	300 watts	200 watts	180 watts	120 watts	60 watts	60 watts
*FTC Full Bandwidth Output Power at 4 Ohms***	450 watts	300 watts	270 watts	180 watts	90 watts	90 watts
Input Sensitivity for Full Rated Power	1.8 Volts	1.6 Volts	1.6 Volts	1.3 Volts	0.9 Volts	1.2 Volts
Frequency Response	±0.1dB from 20Hz to 20kHz at 1 watt					
Phase Response	+5 to -15 degrees from 20Hz to 20kHz at 1 watt					
Signal-to-Noise Ratio "A-Weighted"	Greater than 120dB below rated FTC full bandwidth power					
Total Harmonic Distortion (THD)	Less than 0.03% at full rated FTC power from 20Hz to 20kHz Less than 0.005% at full EIA power at 1kHz					
Intermodulation Distortion (IMD)	Less than 0.03% from 250 milliwatts to full rated FTC power					
Load Impedance	Safe with all types of loads. Rated for 4 to 16 ohms					
Power Bandwidth FTC	+0-3db from 5Hz to 100kHz					
Damping Factor	Greater than 400 from 10Hz to 400Hz					
Crosstalk	Greater than -100dB from 20Hz to 20kHz					
Voltage Gain Through RCA Jacks	34dB	34dB	28dB	28dB	28dB	28dB
Voltage Gain Balanced Through XLR Jacks	28dB	28dB	N/A	N/A	N/A	N/A
Slew Rate	50V/microsecond					
Input Impedance	Nominally 28k ohms					
DC Output Offset	Less than ±5mV					
Power Requirements	120 VAC (other voltages available on export models)					
Chassis Dimensions (W x H x D) Inches	17 x 8.75 x 18.3	17 x 7 x 16.5	17 x 7 x 16.5	17 x 3.5 x 12	17 x 3.5 x 10.25	17 x 7 x 16
Chassis Dimensions (W x H x D) Millimeters	431.8 x 222.2 x 464.8	431.8 x 177.8 x 419.1	431.8 x 177.8 x 419.1	431.8 x 88.9 x 304.8	431.8 x 88.9 x 260.4	431.8 x 177.8 x 406.4
Net Weight (lbs/kg) Model Dependent	76-126/34.55-57.27	50-93/22.73-42.27	50-93/22.73-42.27	36/16.36	32/14.55	73/33.18
Shipping Weight (lbs/kg) Model Dependent	88-138/40-62.73	62-105/28.18-47.73	62-105/28.18-47.73	44 /20	48 /21.82	82/37.27

*EIA 1kHz Power refers to maximum average power in watts at 1kHz with 0.005% THD and noise. **FTC Full Bandwidth Power refers to maximum average power in watts from 20Hz to 20kHz with 0.03% THD and noise.

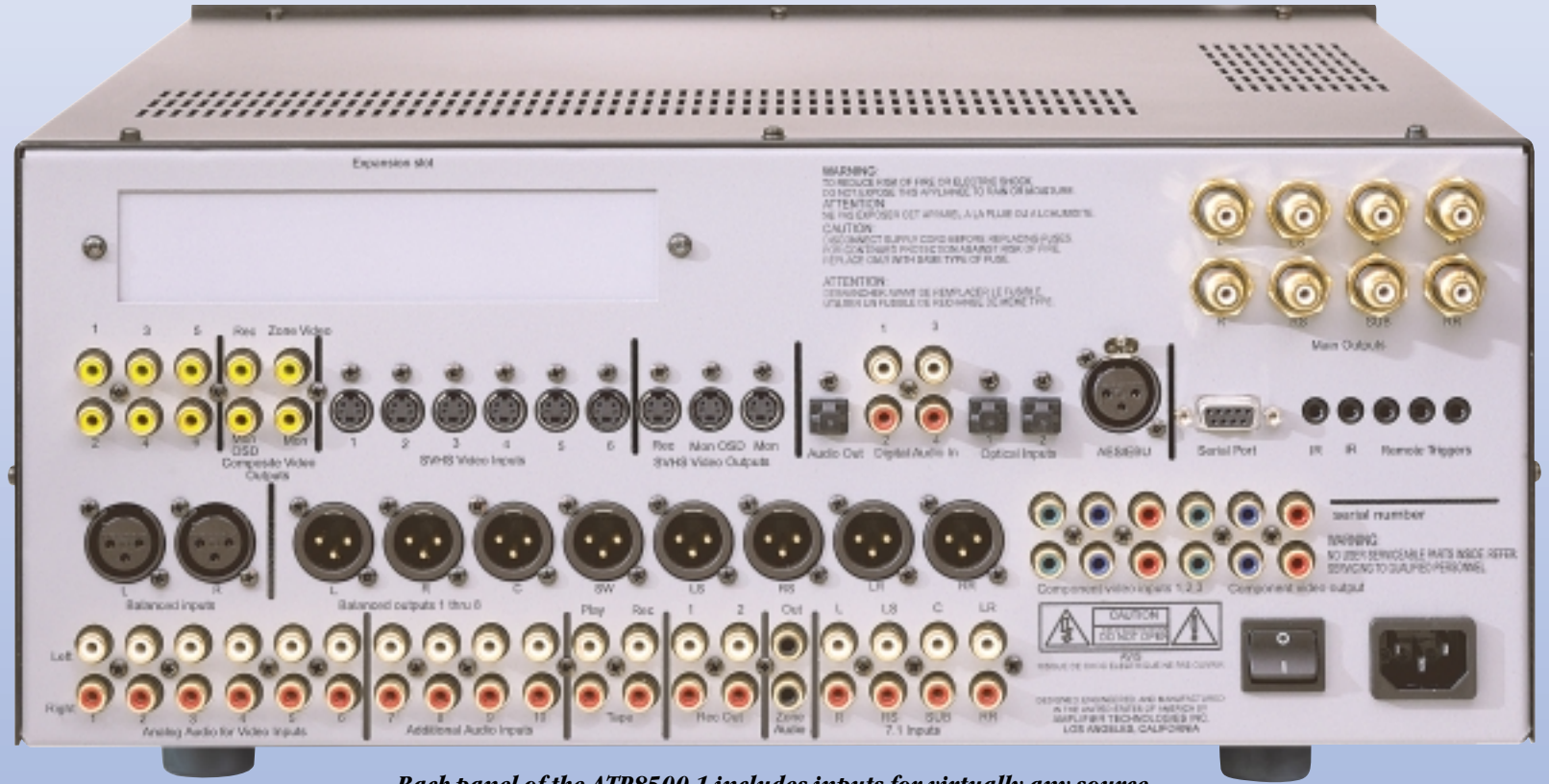
The Heart of State-of-the-Art Home Theater Systems

A truly state-of-the-art home theater system places extreme demands on a surround-sound preamp/processor. With new surround-sound technologies emerging almost monthly, a processor must offer all of the various flavors of Dolby and DTS, and be able to upgrade as new technologies emerge. It must provide every type of audio and video connection in common use, and be able to accommodate more as they are introduced. It must produce the sound quality of audiophile-grade digital components, and the convenience features demanded by custom installers.

In short, it must match the prodigious capabilities found in ATI's top-of-the-line preamp/processor, the ATP8500.1.

While the ATP8500.1 offers all of the surround-sound technologies that high-end home theaters demand—Dolby Digital EX® and Pro Logic II®, and DTS ES-Discrete®—it can also be upgraded as new technologies are developed, either from a computer via the ATP8500.1's RS232 interface, or through interchangeable EPROM memory chips. (A more basic model, the ATP8500, is also available; it features Dolby Digital, Pro Logic, and DTS, and omits Dolby Digital EX, Pro Logic II, and DTS-ES-Discrete. However, it can be upgraded with these technologies at any time.)

Any existing audio/video source—an HDTV satellite receiver, a progressive-scan DVD player, a DVD-Audio and/or SACD player—connects easily to the ATP8500.1. It even has an AES/EBU digital connection for use with high-end CD and DVD transports. Balanced XLR-type outputs for every channel make it ideal for use with ATI's AT3000 and AT2000 Series Pure Balance® amplifiers. And no matter what new video or audio devices emerge, the ATP8500.1 can be upgraded to accommodate them. We left ample space inside the chassis and included a removable panel on the rear, so that new circuit boards and jacks can be added in the future. No matter what video or audio equipment you own (or dream of owning), the ATP8500.1 can accommodate it.



Back panel of the ATP8500.1 includes inputs for virtually any source

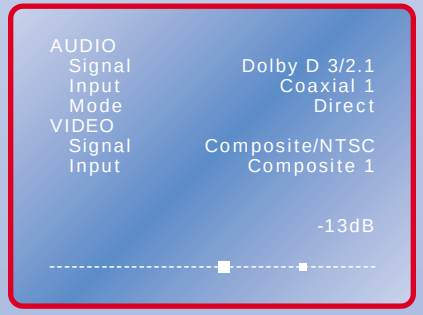
Custom installers will love the ATP8500.1's control features. These include an RS-232 jack that allows easy interfacing with control systems such as Crestron® and AMX® touchscreen remotes, and a second-zone output that lets you listen to or watch any audio or video source in another room. Three remote trigger outputs can be programmed to function only when specific inputs are selected, so you can trigger, say, a motorized screen to drop automatically when the DVD input is selected. The programmable, backlit remote controls not only the ATP8500.1, but every other device in your audio/video system, too.

By now, you must have noticed the ATP8500.1's most distinctive feature—its large, front-panel video monitor. Not only does the monitor let you see images from composite and S-video sources, it also lets you use the ATP8500.1's onscreen setup menus even if you cannot see your TV. This screen proves especially convenient in custom installations where the ATP8500.1 is mounted in a separate equipment closet or room.

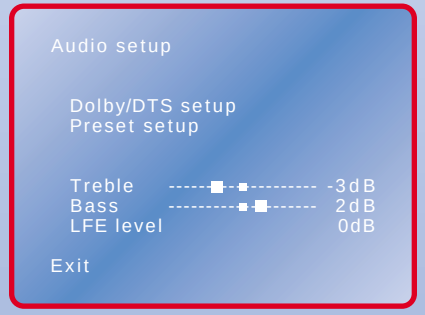
The ATP8500.1 offers outstanding build quality, with double-sided glass-epoxy circuit boards for more reliable solder connections, a powder-coated chassis with 18-8 stainless steel hardware, and rugged, chassis-mounted RCA and XLR main output jacks.

Finally, the ATP8500.1 offers enough inputs for even the most complex home theater systems. They include six composite video inputs, six S-video inputs, three high-definition component video inputs, ten analog and seven digital audio inputs, and balanced XLR-type stereo analog audio inputs.

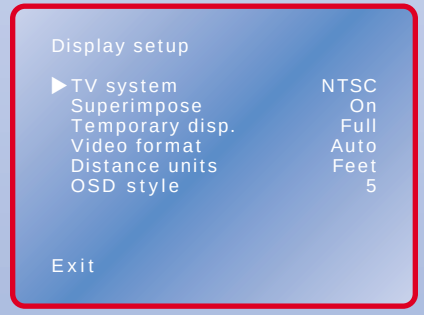
No matter how complex your home theater system, or what you plan to add to it in the future, the ATP8500.1 will meet your needs. Acquire whatever sources you desire. We'll accommodate.



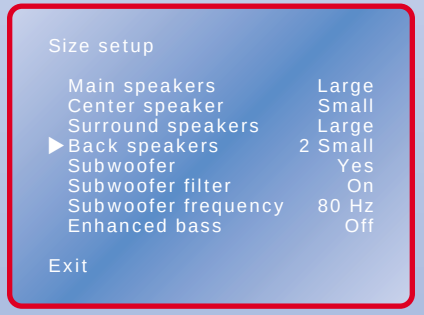
Example of the Main menu



Example of the Audio Setup menu



Example of the Display Setup menu



Example of the Size Setup menu

Modern Technology, Advanced Features & Classic Reliability

When we started building surround-sound preamp/processors, we demanded more than advanced features and up-to-the-minute technology. We wanted our surround-sound preamp/processors to be every bit as durable and reliable as our power amplifiers. And they are.

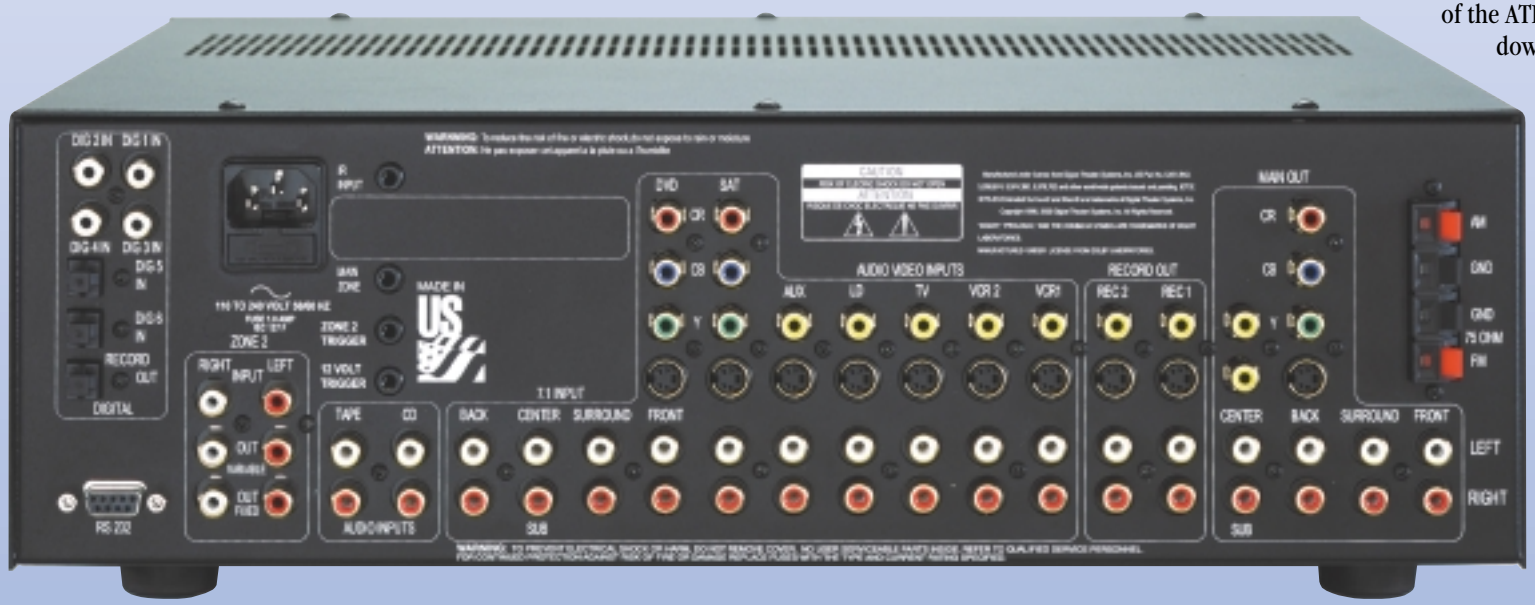
Case in point: the ATP7500.

Despite its modest price, the ATP7500 is built like a tank. We selected the ATP7500's premium components for their performance and reliability, and used double-sided glass-epoxy circuit boards to ensure that those parts remain firmly soldered in place. We package all this in a durable steel chassis with stainless-steel hardware and a tough powder-coated finish. The end result is a processor that's as technologically advanced as a brand-new luxury sedan, but as rugged and reliable as a classic pickup truck.

The ATP7500 offers surround-sound technologies to suit any program material, from VHS tape to multichannel SACD. It includes Dolby Digital EX® and Pro Logic II®, DTS ES-Discrete® and 7.1-channel inputs that accommodate DVD-Audio and SACD players. The 7.1-channel input includes bass management functions, so you can adjust the output of your DVD-A or SACD player to suit your speaker system. Many processors with DVD-A/SACD inputs lack this feature—and as a result, often discard much of the bass in the recordings.

ATP7500 preamp/processor

Custom installers and advanced do-it-yourselfers will appreciate the ATP7500's many convenience features. We start with a learning remote that can control every component in your system. An RS-232 interface makes it easy to control the ATP7500 from advanced touchscreen controllers such as Crestron® and AMX®. A second-zone output permits the use of any video or audio source device in another room. Remote triggers let the ATP7500 control motorized screens, lighting, etc. Discrete on and off buttons make it easy to control the ATP7500 from a programmable remote. Buffered video outputs allow the ATP7500 to feed distant TVs through long video cables. And all of the ATP7500's setup parameters can be downloaded to a computer, making it easy for a home user to restore the settings, and for a custom installer to program multiple ATP7500s.



Back panel of the ATP7500

The back panel includes six composite video and six S-video inputs; two high-definition component video inputs, plus eight analog and six digital audio inputs. There's also an AM/FM stereo tuner, a feature found in few high-end preamp/processors.

You can be forgiven for thinking that modern technology and old-fashioned reliability are mutually exclusive...but the ATP7500 proves that they can co-exist in the same product.

Why Should You Settle For a Just a Receiver?

Value-minded home theater enthusiasts usually purchase audio/video receivers to serve as the centerpiece of their systems. In the process, they sacrifice flexibility, sound quality, and the ability to upgrade in the future. But with the ATP6500, there's no need to settle for a receiver. Combine this advanced-yet-affordable surround-sound preamp/processor with our outstanding AT1807 amp, and you'll have a stack that handily outperforms high-end receivers...at a comparable price.

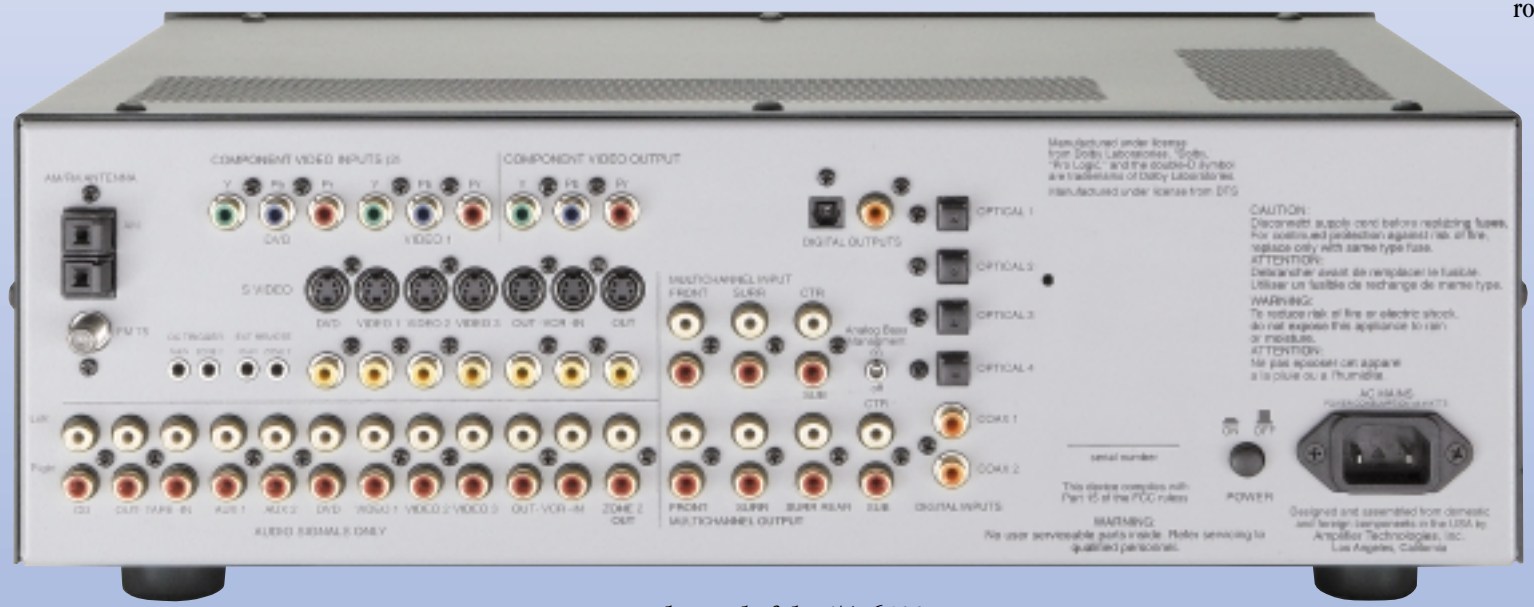
ATP6500 preamp/processor

Like the best receivers, the ATP6500 includes every important surround-sound technology: Dolby Digital EX® and Pro Logic II®, DTS ES-Discrete® and 24/96, and a 5.1-channel input for DVD-Audio and multichannel SACD players. The DVD-A/SACD input even has bass management, with a fixed 80 Hz crossover, so you can adapt the sound from the DVD-A/SACD player to your speaker system and avoid losing bass as you would with many surround processors. The ATP6500 does not digitize the signals coming into the DVD-A/SACD input, either, so every bit of the amazing sound quality of these new formats comes through.

Speaking of bass management, the ATP6500 offers a Triple Crossover feature, which enables you to set different bass management parameters for the main (left/right), center, and surround speakers. Now you can fine-tune your home theater audio system to absolute perfection, giving each speaker exactly as much bass as it was designed to handle.

Even dedicated home theater enthusiasts should find enough inputs and outputs on the ATP6500's back panel. It has five composite video, five S-video inputs, two high-definition component video inputs, six digital audio inputs, and nine analog audio inputs.

It comes with custom-installation-friendly convenience features, too. Its learning remote control can command not only the ATP6500, but every other device in your system, too. A second-zone output lets you enjoy any audio source in a second room. Trigger outputs let the ATP6500 control a motorized screen, room lighting, etc. The backlit remote can be programmed to control all of the other devices in your audio/video system. There's even an AM/FM tuner.



Back panel of the ATP6500

Even at the ATP6500's incredibly affordable price, it still comes with a durable, powder-coated chassis, 18-8 stainless-steel hardware, detachable power cord, and double-sided glass-epoxy circuit boards.

With the ATP6500 preamp/processor, even budget-minded home theater enthusiasts need not compromise when it comes to sound. So kiss that receiver goodbye and say hello to state-of-the-art performance.

Preamplifier/Processor Specifications

All Specifications refer to 1 Vrms and 0 dBf digital or 2 Vrms analog input, except when stated.

Model	*ATP8500/ATP8500.1*	*ATP7500*	*ATP6500*
Input Level	200mVrms	200mVrms	200mVrms
Output Level (Preamp)	8 Vrms	3.5 Vrms	1.5 Vrms
Input Impedance	15 k Ohms	15 k Ohms	26 k Ohms
Total Harmonic Distortion (Stereo Source)	0.01%	<0.03%	<0.03%
Total Harmonic Distortion (7.1 Channel Source)	0.003%	0.003%	0.003%
Frequency Response (Stereo Bypass Mode)	20Hz to 20kHz (±0.3 dB)	20Hz to 20kHz (±0.3 dB)	20Hz to 20kHz (±0.3 dB)
Stereo Analog Input Level	2 Vrms	2 Vrms	2 Vrms
Signal-to-Noise Ratio	98 dB CCIR-ARM	98 dB CCIR-ARM	98 dB CCIR-ARM
Digital Audio Inputs/Outputs	4 Coax, 2 Optical, 1 AES-EBU/1 Optical	4 Coax, 2 Optical/1 Optical	2 Coax, 4 Optical/1 Coax, 1 Optical
Analog Audio Inputs/Outputs	2 Balanced, 11 RCA Pairs/3 RCA Pairs	8 RCA Pairs/2 RCA Pairs	9 RCA Pairs/2 RCA Pairs
7.1-Channel Audio Inputs/Outputs	1Set RCA/1 Set Balanced, 1 Set RCA	1 Set RCA1/Set RCA	1 Set RCA (5.1-Ch)/1 Set RCA
Video Inputs (Composite, S-Video, Component)	6, 6, 3	5, 7, 2	5, 5, 2
Video Outputs (Composite, S-Video, Component)	3, 2, 1	4, 3, 1	2, 2, 1
Second Zone Inputs and Outputs	1 Audio Out with Video	1 Audio In/1 Variable & 1 Fixed Audio Out	1 Audio Output
Triggers	3 Remote, 2 IR	1 Main Zone, 1 Zone 2, 1 12V, 1 IR	DC Main/Z2, Ext Remote Main/Z2
AM/FM Tuner	No	Yes	Yes
Voltage Automatic Setting	100 VAC to 240 VAC	100 VAC to 240 VAC	100 VAC to 240 VAC
Chassis Dimensions (W x H x D) Inches	17 x 7 x 15.5	17 x 5.75 x 12.5	17 x 4.5 x 14.75
Chassis Dimensions (W x H x D) Millimeters	431.8 x 177.8 x 393.7	431.8 x 146.1 x 317.5	431.8 x 114.3 x 374.7
Net Weight (lbs/kg)	24/10.91	24/10.91	18/8.18
Shipping Weight (lbs/kg)	32/14.55	32/14.55	24/10.91

Limited Warranty

ATI products are warranted against defects in materials and workmanship for 90 days from the date of purchase to the original owner. An OPTIONAL EXTENDED 7-YEAR WARRANTY is available to those customers who purchase their product only from an authorized ATI dealer and registers it properly within the required time period. The extended warranty is transferable. We strongly urge you to consult with us to determine if the dealer from whom you wish to purchase your unit has been officially authorized so we can guarantee the best possible service.

ATI Amplifier Technologies
TRANSLATING TECHNOLOGY

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